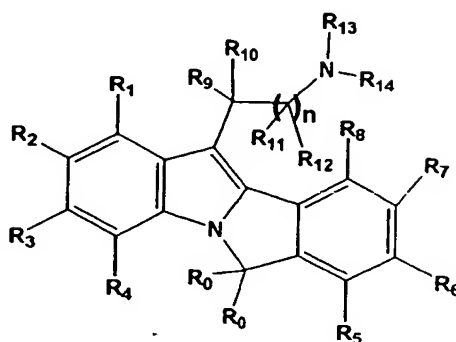


Claims:

1. A compound of the general formula (I),



General Formula (I)

its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts and solvates,

wherein R₀ is either hydrogen or linear or branched (C₁-C₂)alkyl;

R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, R₁₀, R₁₁ and R₁₂ may be same or different and each independently represent substituted or unsubstituted groups such as linear or branched (C₁-C₁₂)alkyl, (C₃-C₇)cycloalkyl, (C₁-C₁₂)alkoxy, cyclo(C₃-C₇)alkoxy, aryl, aryloxy, aralkyl, aralkoxy, heterocyclyl, heteroaralkyl, heteroaryloxy, heteroaralkoxy, heterocyclylalkyloxy, acyl, acyloxy, acylamino, monoalkylamino, dialkylamino, arylamino, diarylamino, aralkylamino, hydroxyalkyl, aminoalkyl, monoalkylaminoalkyl, dialkylaminoalkyl, alkoxyalkyl, alkylthio, aminocarbonylamino, dialkylaminocarbonylamino, carboxylic acid and its derivatives,

R₁₃ and R₁₄ may be same or different and each independently represents hydrogen, substituted or unsubstituted groups such as linear or branched (C₁-C₄)alkyl, (C₃-C₇)cycloalkyl, (C₃-C₇)cycloalkenyl, bicycloalkyl, bicycloalkenyl, aryl, aralkyl, optionally R₁₃ and R₁₄ along with the nitrogen atom, may form a 3, 4, 5, 6 or 7-membered heterocyclic ring, wherein the ring may be further substituted, and it may have either one, two or three double bonds or "additional heteroatoms", as defined above; and
"n" is an integer ranging from 1 to 6.8, preferably 1 to 4. The carbon chains which 'n' represents may be either linear or branched.

2. A compound according to Claim -1, which is selected from the group consisting of:

11-(2-N,N-Dimethylaminoethyl)-6*H*-isoindolo[2,1-*a*]indole;

2-Chloro-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-*a*]indole;

2-Chloro-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-*a*]indole hydrochloride salt;

5 2-Chloro-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-*a*]indole maleic acid salt;

2-Chloro-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-*a*]indole D,L-malic acid salt;

2-Chloro-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-*a*]indole oxalate salt;

2-Chloro-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-*a*]indole citrate salt;

2-Fluoro-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-*a*]indole;

10 2-Chloro-11-(2-N,N-diethylaminoethyl)-6*H*-isoindolo[2,1-*a*]indole citrate salt;

2-Fluoro-11-(2-N,N-diethylaminoethyl)-6*H*-isoindolo[2,1-*a*]indole;

2-Chloro-11-(2-N-cyclopropyl-N-methylaminoethyl)-6*H*-isoindolo[2,1-*a*]indole citrate salt;

2-Fluoro-11-(2-N-cyclopropyl-N-methylaminoethyl)-6*H*-isoindolo[2,1-*a*]indole;

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- 11-(2-N,N-Dimethylaminoethyl)-2-methyl-6*H*-isoindolo[2,1-a]indole;
11-(2-N,N-Dimethylaminoethyl)-2-methoxy-6*H*-isoindolo[2,1-a]indole;
2-Bromo-11-(2-N,N-diethylaminoethyl)-6*H*-isoindolo[2,1-a]indole;
2-Bromo-11-(2-N-methyl-N-cyclopropylaminoethyl)-6*H*-isoindolo[2,1-a]indole;
5 4-Chloro-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-a]indole;
3,4-Dichloro-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-a]indole;
1-Chloro-11-(2-N,N-dimethylaminoethyl)-4-methyl-6*H*-isoindolo[2,1-a]indole;
3-Chloro-11-(2-N,N-dimethylaminoethyl)-4-methyl-6*H*-isoindolo[2,1-a]indole;
3-Chloro-11-[(2-N-methylamino)ethyl]-4-methyl-6*H*-isoindolo[2,1-a]indole;
10 3-Chloro-11-[(2-N-methyl-N-acetylamino)ethyl]-4-methyl-6*H*-isoindolo[2,1-a]indole;
3-Chloro-11-[(2-N-methylamino)ethyl]-2-methoxy-6*H*-isoindolo[2,1-a]indole;
3-Chloro-11-[(2-N-methylamino)ethyl]-2-sulfoamido-6*H*-isoindolo[2,1-a]indole;
3-Iodo-11-[(2-N-methylamino)ethyl]-2-methoxy-6*H*-isoindolo[2,1-a]indole;
11-(2-N,N-Dimethylaminoethyl)-4-trifluoromethyl-6*H*-isoindolo[2,1-a]indole;
15 2,4-Difluoro-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-a]indole;
11-(2-Pyrrolidin-1-ylethyl)-6*H*-isoindolo[2,1-a]indole;
2-Bromo-11-(2-pyrrolidin-1-ylethyl)-6*H*-isoindolo[2,1-a]indole;
11-(2-(Piperidin-1-yl)ethyl)-6*H*-isoindolo[2,1-a]indole;
11-(2-(4-Methylpiperazin-1-yl)ethyl)-6*H*-isoindolo[2,1-a]indole;
20 11-(3-(Pyrrolidin-1-yl)-1-hydroxyprop-1-yl)-6*H*-isoindolo[2,1-a]indole;
2-Bromo-11-(3-(piperidin-1-yl)-1-hydroxyprop-1-yl)-6*H*-isoindolo[2,1-a]indole;
11-(2-N,N-Dimethylaminoethyl)-4-ethyl-6*H*-isoindolo[2,1-a]indole;
11-(2-N,N-Dimethylamino-1-hydroxyethyl)-6*H*-isoindolo[2,1-a]indole;
11-(2-N,N-Dimethylaminoethyl)-4-methoxy-6*H*-isoindolo[2,1-a]indole;
25 2-Bromo-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-a]indole;
4-Bromo-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-a]indole;
4-Fluoro-11-(2-N,N-dimethylaminoethyl)-6*H*-isoindolo[2,1-a]indole;
2-Bromo-11-(2-(4-methylpiperazin-1-yl)ethyl)-6*H*-isoindolo[2,1-a]indole; and
its stereoisomers, its N-oxides, its polymorphs, its pharmaceutically acceptable salts and
30 solvates.
3. A pharmaceutical composition comprising either of a pharmaceutically acceptable
carrier, diluent/s, excipient/s or solvates along with a therapeutically effective amount
of a compound according to Claim-1, its derivatives, its analogs, its tautomeric forms,
35 its stereoisomers, its geometric forms, its N-oxides, its polymorphs, its
pharmaceutically acceptable salts, or solvates.

4. A pharmaceutical composition according to Claim-3, in the form of a tablet, capsule, powder, lozenges, suppositories, syrup, solution, suspension or injectable, administered in, as a single dose or multiple dose units.
- 5 5. Use of compound of general formula (I), as defined in Claim-1 or a pharmaceutical composition as defined in Claim-3 for preparing medicaments.
6. Use of compound of general formula (I), as defined in Claim-1 or a pharmaceutical composition as defined in Claim-3 for the treatment where a modulation of 5-HT
10 melatonin activity is desired.
7. Use of a compound as claimed in Claim-1 for the manufacture of a medicament for the treatment and/or prevention of clinical conditions for which a selective action on 5-HT
15 receptors is indicated.
8. Use of a compound as claimed in Claim-1 for the treatment and/or prevention of clinical conditions such as anxiety, depression, convulsive disorders, obsessive-compulsive disorders, migraine headache, cognitive memory disorders, ADHD (Attention Deficient Disorder/ Hyperactivity Syndrome), personality disorders, psychosis, paraphrenia,
20 psychotic depression, mania, schizophrenia, schizophreniform disorders, withdrawal from drug abuse, panic attacks, reproduction, glaucoma, sleep disorders and also disorders associated with spinal trauma and /or head injury.
9. Use of a compound as claimed in Claim-1 for the treatment of mild cognitive impairment
25 and other neurodegenerative disorders like Alzheimer's disease, Parkinsonism and Huntington's chorea.
10. Use of a compound as claimed in Claim-1 for the treatment of certain GI (Gastrointestinal) disorders such as IBS (Irritable bowel syndrome) or chemotherapy
30 induced emesis.
11. Use of a compound as claimed in Claim-1 to reduce morbidity and mortality associated with the excess weight.
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12. Use of a radiolabelled compound as claimed in Claim-1, as a diagnostic tool for modulating 5-HT receptor function.

13. Use of a compound as claimed in Claims 1 in combination with a 5-HT re-uptake inhibitor, and / or a pharmaceutically acceptable salt thereof.

14. A compound of the general formula (1), its derivatives, its analogs, its tautomeric forms, its stereoisomers, its polymorphs, its pharmaceutically acceptable salts and its pharmaceutically acceptable solvates for preparing a medicament.

15. A method for the treatment and/or prophylaxis of clinical conditions such as anxiety, convulsive disorders, obsessive-compulsive disorders, migraine headache, cognitive memory disorders, ADHD (Attention Deficient Disorder/ Hyperactivity Syndrome), personality disorders, psychosis, paraphrenia, psychotic depression, mania, schizophrenia, schizophreniform disorders, withdrawal from drug abuse, panic attacks, reproduction, glaucoma, sleep disorders and also disorders associated with spinal trauma and /or head injury which comprises administering to a patient in need thereof, an effective amount of a compound of general formula (I) as claimed in Claim-1.

16. A method for the treatment and/or prophylaxis of mild cognitive impairment and other neurodegenerative disorders like Alzheimer's disease, Parkinsonism and Huntington's chorea which comprises administering to a patient in need thereof, an effective amount of a compound of general formula (I) as claimed in Claim-1.

17. A method for the treatment of certain GI (Gastrointestinal) disorders such as IBS (Irritable bowel syndrome) or chemotherapy induced emesis using a compound of general formula (I) as claimed in Claim-1.

18. A method to reduce morbidity and mortality associated with the excess weight using a compound of general formula (I) as claimed in Claim-1.

19. Use of a compound as claimed in Claims 1 and/or Claim 28, in combination with either of 5-HT re-uptake inhibitor, Melatonin or Melatoninergic modulator, and / or their pharmaceutically acceptable salts so as to achieve desired therapeutic benefit.

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